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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/638,153	08/06/2003	Chao Cheng Chiang	4066CH	6064

7590 02/23/2005
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EXAMINER

KERSHTEYN, IGOR

ART UNIT	PAPER NUMBER
3745	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/638,153	Applicant(s) CHIANG ET AL.	
	Examiner Igor Kershteyn	Art Unit 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4-8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>08/06/2003</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jailor et al. (4,418,261) in view of Wang (5,988,979).

Jailor et al., in figures 3-6, and 10 teach a smoke exhauster comprising a housing 96, a motor 98 attached to said housing 96, and a fan device 100 attached to said motor 98 and to be driven by said motor 98, said fan device 100 including an upper plate (not numbered), a lower plate (not numbered) having a bore (not numbered) formed therein, and a plurality of fan blades (not numbered) secured between said upper plate and said lower plate, to define a chamber between said upper plate and said lower plate of said fan device 100, said chamber of said fan device 100 being communicating with said bore of said lower plate to allow air to flow into said chamber of said fan device 100.

Jailor et al. don't teach each of said fan blades including a lower cut-off portion formed therein to allow the air to flow deeper into said chamber of said fan device before contacting with said fan blades, and each of said fan blades includes an inclined edge defined by said lower cut-off portion thereof.

Wang, in figures 1 and 2, teaches a fan device 10 having a plurality of blades 20, an upper plate 14, a lower plate 30, each of said fan blades 20 including a lower cut-off portion 25 formed therein to allow the air to flow deeper into a chamber of said fan device 10 before contacting with said fan blades 20, and each of said fan blades 20 includes an inclined edge defined by said lower cut-off portion 25.

Since Jailor et al. and Wang are analogous art because they are from the same field of endeavor, that is the fan device art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the fan device of Jailor et al. with the cut-off portion as taught by Wang for the purpose of allowing greater air flow through the fan device without increasing the overall size of the fan device.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable Jailor et al. (4,418,261) as modified by Wang (5,988,979) further in view of Mathis (1,876,518).

Jailor et al. as modified by Wang teach all the claimed subject matter except that they don't teach the upper plate and said lower plate each includes a plurality of slits formed therein, each of said fan blades includes an upper portion and a lower portion each having at least one ear extended therefrom and engaged through said slits of said upper and said lower plates, for securing said fan blades between said upper and said lower plates.

Mathis, in figures 1-8, teaches a fan device having an upper plate B, a lower plate C, a plurality of blades D, the upper plate B and said lower plate C each includes a

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plurality of slits C1,B3 formed therein, each of said fan blades D includes an upper portion D1 and a lower portion D3 each having at least one ear D4, D2 extended therefrom and engaged through said slits C1,B3 of said upper B and said lower C plates, for securing said fan blades D between said upper B and said lower B plates.

Since Jailor et al. as modified by Wang and Mathis are analogous art because they are from the same field of endeavor, that is the centrifugal blower art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the upper and lower plates and blades of Jailor et al. as modified by Wang with the slots and ears as taught by Mathis for the purpose of providing a blower wheel with replaceable blades.

Allowable Subject Matter

Claims 4-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior Art

Prior art made of record but not relied upon is considered pertinent to Applicant's disclosure and consist of five patent documents.

Lawrie (1,730,372) is cited to show a centrifugal blower having an upper plate, a lower plate, and blades having a cut-off portion but fails to teach a cut-off portion being the lower cut-off portion of the blade.

Sprouse (2,803,398) is cited to show a centrifugal blower having an upper plate, a lower plate, and blades having a cut-off portion but fails to teach a cut-off portion being the lower cut-off portion of the blade.

Chiang (5,035,398) is cited to show a centrifugal blower having an upper plate, a lower plate, and blades but fails to teach a lower cut-off portion of the blade.

Chiang et al. (6,782,885) is cited to show a centrifugal blower having an upper plate, a lower plate, and blades but fails to teach a lower cut-off portion of the blade.

U.S. Patent Application Publication No. 2003/0101985 is cited to show a centrifugal blower having an upper plate, a lower plate, and blades but fails to teach a lower cut-off portion of the blade.

Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kershteyn whose telephone number is **(571)272-4817**. The examiner can be reached on Monday-Friday from 8:00 a.m. to 4:30 p.m.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached on **(571)272-4820**. The fax number is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308 0861.

IK
February 15, 2005

A handwritten signature in black ink, appearing to read 'Igor Kershteyn', written in a cursive style.

Igor Kershteyn
Patent examiner.
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